<u>WHAT IS CLAIMED IS:</u>

1. A method of dynamically routing data within a network, comprising the steps of:

receiving the data and an associated destination list at a transmitting node in the network;

identifying a destination for the data from the destination list;

referencing a dynamic routing table for routing information for the destination;

determining an efficient method of transmitting the data based on the routing information; and

transmitting the data to a neighbor node based on the determination of the method.

2. The method of claim 1, wherein the step of identifying a destination further comprises reading a destination address from the destination list.

3. The method of claim 2, wherein the step of reading a destination address from the destination list further comprises removing the destination address from the destination list.

4. The method of claim 1, wherein the step of referencing a dynamic routing table further comprises looking up a possible route in the dynamic routing table.

5. The method of claim 4, wherein the step of looking up the possible route in the dynamic routing table further comprises reading a value associated with a number of hops for the possible route.

6. The method of claim 4, wherein the step of looking up the possible route in the dynamic routing table further comprises reading a value associated with the goodness factor for the possible route.

7. The method of claim 5, wherein the step of determining the most efficient method of transmitting the data further comprises performing a calculation on the routing information.

8. The method of claim 7, wherein the step of performing the calculation on the routing information further comprises choosing a route based on the calculation.

9. The method of claim 1, wherein the step of transmitting the data further comprises the step of appending path field information to the destination list associated with the data.

10. The method of claim 9, wherein the step of appending path field information to the data further comprises appending the address of the transmitting node and the goodness factor of the neighbor node to the destination list associated with the data.

11. The method of claim 1, further comprising the step of updating the dynamic routing table based on path field information of the destination list associated with the data.

12. The method of claim 1 further comprising the step of repeating the identifying, referencing, determining, and transmitting steps for each destination with the destination list.

13. The method of claim 1, wherein the transmitting step further comprises appending a new destination list to the data prior to transmittal.

14. The method of claim 12, wherein the transmitting step further comprises appending a new destination list to the data prior to transmittal.

15. A node within a network for dynamically routing data, comprising:

a processor;

a memory storage device coupled to the processor;

a communications interface coupled to the processor and at least one other system on the network; and

the processor being operative to

receive the data and an associated destination list at the node in the network,

identify a destination for the data from the destination list,

reference a dynamic routing table for routing information for the destination node,

determine an efficient method of transmitting the data based on the routing information, and

cause the data to be transmitted through the communications interface based on the determination of the efficient method.

16. The system of claim 15, wherein the processor is further operative to read a destination address from the destination list.

17. The system of claim 16, wherein the processor is further operative to remove the destination address from the destination list.

18. The system of claim 15, wherein the processor is further operative to look up a possible route in the dynamic routing table.

19. The system of claim 18, wherein the processor is further operative to read a value associated with the number of hops for the possible route.

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20. The system of claim 18, wherein the processor is further operative to read a value associated with a goodness factor for the possible route.

21. The system of claim 19, wherein the processor is further operative to perform a calculation on the routing information.

22. The system of claim 21, wherein the processor is further operative to choose a route based on the calculation.

23. The system of claim 15, wherein the processor is further operative to append path field information to the data.

24. The system of claim 22, wherein the processor is further operative to append the address of the transmitting node and a goodness factor of the neighbor node.

25. The system of claim 23, wherein the processor is further operative to update the dynamic routing table based on path field information of the destination list associated with the data.

26. The system of claim 15, wherein the processor is further operative to append a new destination list to the data prior to transmittal.

27. A computer-readable medium containing instructions for dynamically routing data across a network, the instructions comprising the steps of:

receiving the data and an associated destination list at a transmitting node in the network;

identifying a destination for the data from the destination list;

referencing a dynamic routing table for routing information for the destination;

determining an efficient method of transmitting the data based on the routing information; and

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transmitting the data to a neighbor node based on the determination of the efficient method.

28. The computer-readable medium of claim 26, wherein the step of identifying a destination further comprises reading a destination address from the destination list.

29. The computer-readable medium of claim 27, wherein the step of reading a destination address from the destination list further comprises removing the destination address from the destination list.

30. The computer-readable medium of claim 26, wherein the step of referencing a dynamic routing table further comprises looking up a possible route in the dynamic routing table.

31. The computer-readable medium of claim 29, wherein the step of looking up the possible route in the dynamic routing table further comprises reading a value associated with a number of hops for the possible route.

32. The computer-readable medium of claim 29, wherein the step of looking up the possible route in the dynamic routing table further comprises reading a value associated with a goodness factor for the possible route.

33. The computer-readable medium of claim 30, wherein the step of determining the most efficient method of transmitting the data further comprises performing a calculation on the routing information.

34. The computer-readable medium of claim 32, wherein the step of performing a calculation on the routing information further comprises choosing a route based on the calculation.

35. The computer-readable medium of claim 26, wherein the step of transmitting the data further comprises the step of appending path field information to the data.

36. The computer-readable medium of claim 34, wherein the step of appending path field information to the data further comprises appending the address of the transmitting node and a goodness factor of the neighbor node.

37. The computer-readable medium of claim 35, further comprising the step of updating the dynamic routing table based on the path field information of the destination list associated with the data.

38. The computer-readable medium of claim 26 further comprising the step of repeating the identifying, referencing, determining, and transmitting steps for each destination with the destination list.

39. The computer-readable medium of claim 26, wherein the transmitting step further comprises appending a new destination list to the data prior to transmittal.

40. The computer-readable medium of claim 37, wherein the transmitting step further comprises appending a new destination list to the data prior to transmittal.

41. A method of dynamically updating routing information within a node of a network, comprising the steps of:

determining the quality of a route from the node to a neighbor node as a quality factor;

updating a dynamic routing table in the node with the quality factor for the connection to the neighbor node; and

transmitting the quality factor for the route to at least one other node in the network.

42. The method of claim 40, wherein the quality factor of the route is a goodness factor.

43. The method of claim 40, wherein the step of transmitting the quality factor further comprises the steps of:

associating the quality factor with the route; and

transmitting the quality factor and route with data to at least one other node in the network.

44. The method of claim 42, wherein the quality factor is the goodness factor.

45. The method of claim 42, wherein the step of transmitting the quality factor and route further comprises the step of:

appending the quality factor and route to a path field of a destination list associated with the data.

46. The method of claim 42, wherein the step of transmitting the quality factor and route is further comprised of transmitting the quality factor and route to the neighbor node.

47. The method of claim 40, further comprising the steps of:

receiving a second quality factor for a second route from a second node in the network; and

updating the dynamic routing table in the node with the second quality factor for the second route.

48. A node within a network, comprising:

a processor;

a memory storage device coupled to the processor;

a communications interface coupled to the processor and at least one other node on the network; and

the processor being operative to

determine the quality of a route from the node to a neighbor node as a quality factor,

update a dynamic routing table in the node with the quality factor for the connection to the neighbor node, and

transmit the quality factor for the route to at least one other node in the network.

49. The system of claim 47, wherein the quality factor of the route is a goodness factor.

50. The system of claim 48, wherein the processor is further operative to

associating the quality factor with the route, and

transmitting the quality factor and route with data to at least one other node in the network.

51. The system of claim 49, wherein the quality factor is the goodness factor.

52. The system of claim 49, wherein the processor is further operative to append the quality factor and route to a path field of a destination list associated with the data.

53. The system of claim 49, wherein the processor is further operative to transmit the quality factor and route to the neighbor node.

54. The system of claim 47, the processor is further operative to

receive a second quality factor for a second route from a second node in the network, and

update the dynamic routing table in the node with the second quality factor for the second route.

55. A computer-readable medium containing instructions for dynamically updating a routing table of a node, the instructions comprising the steps of:

determining the quality of a route from the node to a neighbor node as a quality factor;

updating a dynamic routing table in the node with the quality factor for the connection to the neighbor node; and

transmitting the quality factor for the route to at least one other node in the network.

56. The computer-readable medium of claim 54, wherein the quality factor of the route is a goodness factor.

57. The computer-readable medium of claim 54, wherein the step of transmitting the quality factor further comprises the steps of:

associating the quality factor with the route; and

transmitting the quality factor and route with data to at least one other node in the network.

58. The computer-readable medium of claim 56, wherein the quality factor is the goodness factor.

59. The computer-readable medium of claim 56, wherein the step of transmitting the quality factor and route further comprises the step of:

appending the quality factor and route to a path field of a destination list associated with the data.

60. The computer-readable medium of claim 56, wherein the step of transmitting the quality factor and route is further comprised of transmitting the quality factor and route to the neighbor node.

61. The computer-readable medium of claim 54, further comprising the steps of:

receiving a second quality factor for a second route from a second node in the network; and

updating the dynamic routing table in the node with the second quality factor for the second route.